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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/026,667	12/21/2001	Raul R. Mena	17147.00011	7032

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EXAMINER	
O CONNOR, CARY E	

ART UNIT	PAPER NUMBER
3732	

DATE MAILED: 05/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/026,667	MENA	
	Examiner	Art Unit	
	Cary E. O'Connor	3732	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 March 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,9-16 and 18-29* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6,9-16,18-24,26 and 29* is/are rejected.

7)☒ Claim(s) *25,27 and 28* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *6-7-02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

Claims 19 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 recites the limitation "adjacent thread segments" in the last line. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 19 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Niznick (5,061,181). Niznick shows a fixation device forming a dental implant comprising a shaft 31 having an outer face, a plurality of fin sections 33-39 disposed along a portion of the outer face, coaxial with the shaft and having a diameter greater than the diameter of the outer face, each fin section comprising a first face having a first end portion in curved contact with the outer face, a second end portion opposite the first end portion, a second face having a third end portion in curved contact with the outer face, a forth end portion opposite the third end portion, and a third end face coupled to

the second end portion and the forth end portion and being substantially parallel with the outer face. Niznick also shows a transverse slot 105.

Claims 23, 24, 26 and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Ura (6,234,797). Ura shows a fixation device comprising a shaft having an outer face, a threaded portion wound around the outer face and forming a helical groove, the threaded portion comprising a first face 40 having a first end portion in curved contact with the outer face, a second end portion opposite the first end portion, a second face 41 having a third end portion in curved contact with the outer face, a forth end portion opposite the third end portion, and a third end face 38 coupled to the second end portion and the forth end portion and being substantially parallel with the outer face. As to claim 23, note that the second face 40 is substantially flat and substantially perpendicular with the third face and the outer face. As to claims 24 and 26, note that the angle formed by the plane of the outer face and the plane of the first face 41 may be between 135 and 175 degrees which overlaps the range claimed by applicant. As to claim 29, the shaft tapers at the distal end.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 3, 6, 9, 11, 13, 15 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lazzara (5,022,860) in view of Kwan (5,338,197). Lazzara shows a fixation device forming a dental implant comprising a shaft having an outer face 38.1, a threaded portion wound around the outer face and forming a helical groove, the threaded portion comprising a first face having a first end portion in curved contact with the outer face, a second end portion opposite the first end portion, a second face having a third end portion in curved contact with the outer face, a forth end portion opposite the third end portion, and a third end face 32.7 coupled to the second end portion and the forth end portion and being substantially parallel with the outer face (see Fig. 3A and column 3, lines 49-59). Lazzara does not show a transverse slot resulting in separate thread segments whereby the outer face of the shaft is exposed. Kwan shows fixation device comprising a shaft having an outer face and a threaded portion 53 wound around the outer face and forming a helical groove 52. The fixture includes a transverse slot 84 resulting in separate thread segments whereby the outer face of the shaft is exposed. The slot serves to prevent the shaft from rotation in the bone (column 7, lines 11-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the shaft of Lazzara with a transverse slot, as taught by Kwan, in order to prevent rotation of the device in the bone. As to claim 3, the third face contacts the second end portion at a first point and the forth end portion at a second point. As to claims 6, 9, 11 and 13, see column 4, lines 54-60. As to claim 15, Lazzara does not

disclose the length of the third face. It would have been obvious to make the length of the third face between 0.25mm and 3.00 mm because Lazzara discloses the general conditions of the third face and it has been held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136.

Claims 1, 2, 4-6, 9, 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansson (6,036,491) in view of Kwan (5,338,197). Hansson shows a fixation device comprising a shaft having an outer face, a threaded portion wound around the outer face and forming a helical groove, the threaded portion comprising a first face having a first end portion in curved contact with the outer face, a second end portion opposite the first end portion, a second face having a third end portion in curved contact with the outer face, a forth end portion opposite the third end portion, and a third end face coupled to the second end portion and the forth end portion and being substantially parallel with the outer face. Hansson does not show a transverse slot resulting in separate thread segments whereby the outer face of the shaft is exposed. Kwan shows fixation device comprising a shaft having an outer face and a threaded portion 53 wound around the outer face and forming a helical groove 52. The fixture includes a transverse slot 84 resulting in separate thread segments whereby the outer face of the shaft is exposed. The slot serves to prevent the shaft from rotation in the

bone (column 7, lines 11-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the shaft of Hansson with a transverse slot, as taught by Kwan, in order to prevent rotation of the device in the bone. As to claim 2, note that the third face is in curved contact with the first and forth end portions. As to claims 4 and 5, note column 3, line 7. As to claims 6 and 11, note column 3, line 8.

Claims 1, 3, 6, 11 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sandhaus (4,466,796) in view of Kwan (5,338,197). Sandhaus shows a fixation device 1 comprising a shaft 3 having an outer face, a threaded portion wound around the outer face and forming a helical groove, the threaded portion comprising a first face having a first end portion in curved contact with the outer face, a second end portion opposite the first end portion, a second face 8 having a third end portion in curved contact with the outer face, a forth end portion opposite the third end portion, and a third end face 7 coupled to the second end portion and the forth end portion and being substantially parallel with the outer face. Sandhaus does not show a transverse slot resulting in separate thread segments whereby the outer face of the shaft is exposed. Kwan shows fixation device comprising a shaft having an outer face and a threaded portion 53 wound around the outer face and forming a helical groove 52. The fixture includes a transverse slot 84 resulting in separate thread segments whereby the outer face of the shaft is exposed. The slot serves to prevent the shaft from rotation in the bone (column 7, lines 11-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the shaft of Sandhaus with a

transverse slot, as taught by Kwan, in order to prevent rotation of the device in the bone. As to claim 3, the third face contacts the second end portion at a first point and the forth end portion at a second point (Figure 3). As to claims 6 and 11, the distance between the plane of the outer face and the plane of the third face P_s is about 0.55 mm (col. 2, lines 45-46).

Claims 1, 3, 5, 18, 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ura (6,234,797) in view of Kwan (5,338,197). Ura shows a fixation device comprising a shaft having an outer face, a threaded portion wound around the outer face and forming a helical groove, the threaded portion comprising a first face 41 having a first end portion in curved contact with the outer face, a second end portion opposite the first end portion, a second face 40 having a third end portion in curved contact with the outer face, a forth end portion opposite the third end portion, and a third end face 38 coupled to the second end portion and the forth end portion and being substantially parallel with the outer face. Ura does not show a transverse slot resulting in separate thread segments whereby the outer face of the shaft is exposed. Kwan shows fixation device comprising a shaft having an outer face and a threaded portion 53 wound around the outer face and forming a helical groove 52. The fixture includes a transverse slot 84 resulting in separate thread segments whereby the outer face of the shaft is exposed. The slot serves to prevent the shaft from rotation in the bone (column 7, lines 11-15). It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the shaft of Ura with a transverse slot, as taught by Kwan, in order to prevent rotation of the device in the bone. As to claim 3, the third

face contacts the second end portion at a first point and the forth end portion at a second point (Figure 5). As to claims 21 and 22, note that the second face 40 is substantially flat and substantially perpendicular with the third face and the outer face. As to claim 5, note that the angle formed by the plane of the outer face and the plane of the first face 41 may be between 135 and 175 degrees which overlaps the range claimed by applicant.

Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Niznick (5,022,860) in view of Kwan (5,338,197). Niznick shows a fixation device forming a dental implant comprising a shaft 31 having an outer face, a plurality of fin sections 33-39 disposed along a portion of the outer face, coaxial with the shaft and having a diameter greater than the diameter of the outer face, each fin section comprising a first face having a first end portion in curved contact with the outer face, a second end portion opposite the first end portion, a second face having a third end portion in curved contact with the outer face, a forth end portion opposite the third end portion, and a third end face coupled to the second end portion and the forth end portion and being substantially parallel with the outer face. Niznick does not show a transverse slot resulting in separate fin segments whereby the outer face of the shaft is exposed. Kwan shows fixation device comprising a shaft having an outer face and a threaded portion 53 wound around the outer face and forming a helical groove 52. The fixture includes a transverse slot 84 resulting in separate thread segments whereby the outer face of the shaft is exposed. The slot serves to prevent the shaft from rotation in the bone (column 7, lines 11-15). It would have been obvious to one of ordinary skill in the

art at the time the invention was made to provide the shaft of Lazzara with a transverse slot, as taught by Kwan, in order to prevent rotation of the device in the bone.

Claims 10, 12, 14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lazzara (5,022,860) in view of Kwan (5,338,197), as applied to claim 1 above, and further in view of Grell et al (4,177,524). It would have been obvious to one of ordinary skill in the art at the time the invention was made to adapt the dental implant of Lazzara for use as an orthopedic implant in view of the similar structural characteristics shown in Figure 1 of Grell. As to claim 16, Lazzara does not disclose the length of the third face. It would have been obvious to make the length of the third face between 0.25mm and 3.00 mm because Lazzara discloses the general conditions of the third face and it has been held that where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation. In re Swain et al., 33 CCPA (Patents) 1250, 156 F.2d 239, 70 USPQ 412; Minnesota Mining and Mfg. Co. v. Coe, 69 App. D.C. 217, 99 F.2d 986, 38 USPQ 213; Allen et al. v. Coe, 77 App. D.C. 324, 135 F.2d 11, 57 USPQ 136.

Allowable Subject Matter

Claims 25, 27 and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 1, 18, 19 and 20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cary E. O'Connor whose telephone number is 703-308-2701. The examiner can normally be reached on M-F 7:00am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kevin P. Shaver can be reached on 703-308-2582. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9306 for regular communications and 703-872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0858.

Cary E. O'Connor
Primary Examiner
Art Unit 3732

ceo
April 30, 2004